

## Monthly Operation and Maintenance Status Report – October 2013, Velsicol Chemical/Pine River Site, Operable Unit 1, St. Louis, Michigan

TO: Tom Alcamo/USEPA  
FROM: CH2M HILL  
DATE: November 26, 2013

This technical memorandum was prepared to satisfy the monthly reporting requirements of Work Assignment No. 173-LRLR-0532 for the Velsicol Chemical Superfund Site, Operable Unit 1 (OU1), in St. Louis, Michigan (Site). This technical memorandum provides a brief background and description of the dense non-aqueous phase liquid/groundwater (DNAPL/GW) collection system, a summary of the monthly activities associated with operations and maintenance (O&M) of the system, weekly and monthly system pumping and waste removal volumes, the results of equipment and shoreline inspections, description of maintenance activities performed during the reporting period, generator copies of the uniform hazardous waste manifests, and upcoming activities associated with the system.

### System Background and Description

In July 2002, DNAPL was encountered within a natural sand and gravel channel incised into the glacial till in the Hot Spot Cell. Approximately 2,700 gallons of DNAPL were removed from the sand and gravel channel and transported offsite for disposal at a hazardous waste disposal facility. Additionally, DNAPL was also found during the excavation of Area 3. In response to the discovery of the DNAPL, the DNAPL/GW collection system and a protective cap were installed in the remedial area in 2002. The purpose of the system is to collect the residual DNAPL left within sand seams in the glacial till and to protect the river from residual contamination present on the former plant site.

The DNAPL/GW collection system consists primarily of the collection trenches, collection laterals, and three manholes. The manholes consist of a 5-foot sump installed in the middle of each trench segment to facilitate removal of DNAPL by pumping. The trenches and trench laterals were constructed of 4-inch-diameter perforated high-density polyethylene (HDPE) piping sloped back toward each manhole. The trenches were filled with 2 feet of stone fill, followed by compacted granular fill, after placement of the HDPE pipe.

The protective cap consists of a 6-inch layer of protective sand, a 40-mil textured HDPE geomembrane, a second 6-inch layer of protective sand (placed over the geomembrane), followed by a minimum 2-foot layer of compacted clay. The protective cap was placed over the entire slope and the clay was integrated into the clay placed on the floor of the remedial cells.

The DNAPL/GW collection system was designed and constructed to enable the removal of contaminated groundwater from the DNAPL collection trench manholes as a hydraulic

gradient control measure and to facilitate DNAPL flow into the DNAPL collection trenches. Wastewater from system operations are collected in storage tanks for subsequent offsite disposal.

## DNAPL/GW Collection System Operation Maintenance

The DNAPL/GW collection system O&M activities for the October 2013 operations period were completed in accordance with the requirements and procedures described in the updated draft *Site Management Plan - DNAPL/Groundwater Collection System, Velsicol Chemical Superfund Site, Operating Unit #2, St. Louis, Michigan* (CH2M HILL, 2013). The DNAPL/GW collection system O&M activities were performed on a weekly basis for the October 2013 reporting period. This report describes these system activities and the results of the O&M activities are discussed below.

### System Operations

Weekly operations of the DNAPL/GW collection system were completed on October 2, 9, 15, 23, and 30 2013. Groundwater pumped from the manholes was directed to the onsite wastewater storage tanks. The volume of water pumped from each system manhole on the operation dates during the reporting period, as well as project-to-date volume totals, are summarized in Table 1. Completed copies of the weekly system operations data forms are included in Attachment 1.

TABLE 1 DNAPL/GW Collection System Pumping Volumes <sup>a</sup>				
Date	MH-1	MH-2	MH-3	Total
10/02/2013	6,033	6,484	5,324	17,841
10/09/2013	8,266	7,173	5,316	20,755
10/15/2013	4,535	5,769	4,771	15,075
10/23/2013	6,325	6,289	4,943	17,557
10/30/2013	7,316	5,990	0	13,306
Monthly volume	32,475	31,705	20,354	84,534
Project-to-date total	987,457	908,743	687,483	2,583,683
Note: <sup>a</sup> All volumes reported are in gallons				

### Maintenance

Routine maintenance during the reporting period included the following:

- The weekly DNAPL/GW collection system component inspections were completed on October 2, 9, 15, 23, and 30, 2013. The system component inspections were completed satisfactorily with no deficiencies noted with the exception of the pump at MH-1 tripping during operations on October 2.

- The monthly shoreline inspection was completed on October 9 and 23, 2013. No signs of erosion or DNAPL and/or groundwater seeps were noted during the inspection.
- Pump bearing lubrication was completed at all centrifugal pumps during the reporting period.
- The secondary containment pad was dewatered multiple times during the reporting period to remove accumulated precipitation.

Completed copies of the weekly system inspections forms and the monthly shoreline inspection form are included in Attachment 2.

## Waste Disposal Activities

On November 30, 2009, CH2M HILL received signed copies of the wastewater documentation from the work assignment manager (draft uniform hazardous waste manifest, land disposal restriction, underlying hazardous constituent forms, and waste approval form) and initiated wastewater shipments.

Wastewater was transported from the site on the dates shown on Table 2 by US Ecology Michigan (waste transporter) to their facility in Detroit, Michigan. US Ecology Michigan assumed generator status of wastewater and transported it to the disposal facility. A total of 89,996 gallons of wastewater were removed from the site during the reporting period as summarized in Table 2.

A uniform hazardous waste manifest was generated for each hazardous waste shipment from the site. Generator copies of the uniform hazardous waste manifests are included in Attachment 3.

TABLE 2 Wastewater Transportation and Disposal Volumes <sup>a</sup>	
Date	Volume
10/03/2013	17,724
10/10/2013	19,093
10/17/2013	18,506
10/24/2013	17,612
10/31/2013	17,061
Monthly total	89,996
Project-to-date total	2,659,453
Note: <sup>a</sup> All volumes reported are in gallons.	

## Upcoming Activities

- Submittal of uniform hazardous waste manifests to the Michigan Department of Environmental Quality – Waste and Hazardous Materials Division.
- Weekly system operation will be completed during the next reporting period.

## Attachments

Attachment 1: Weekly system operations data forms

Attachment 2: System inspection forms

Attachment 3: Uniform hazardous waste manifests – generator copies

**Attachment 1**

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# DNAPL/GW Collection System Weekly Data Sheet

Vetscol Pine River Site  
St. Louis, Michigan

Inspector: STP

Date: 10/2/13

MH-1 Groundwater Removal	
Initial Totalizer Reading (gallons)	2518407
Final Totalizer Reading (gallons)	2524440
Total Volume Removed (gallons)	6033
Time start:	1404
Time stop:	1455

MH-2 Groundwater Removal	
Initial Totalizer Reading (gallons)	2511923
Final Totalizer Reading (gallons)	2518407
Total Volume Removed (gallons)	6484
Time start:	1145
Time stop:	1350

MH-3 Groundwater Removal	
Initial Totalizer Reading (gallons)	2506599
Final Totalizer Reading (gallons)	2511923
Total Volume Removed (gallons)	5324
Time start:	0950
Time stop:	1130

# DNAPL/GW Collection System Weekly Data Sheet

Velsicol Pine River Site  
St. Louis, Michigan

Inspector: SB

Date: 10/2/13

MH-1	Initial	Post Pumping
Depth to groundwater (feet below top of manhole)	8'7"	
Relative River Elevation (feet below top of manhole)	7'11"	NA
DNAPL Thickness (feet)	28"	NA
Total Sump Depth (feet below top of manhole)	44'1"	NA

MH-2	Initial	Post Pumping
Depth to groundwater (feet below top of manhole)	<del>28'</del> 9'10"	<del>9'10"</del>
Relative River Elevation (feet below top of manhole)	28'	NA
DNAPL Thickness (feet)	0	NA
Total Sump Depth (feet below top of manhole)	42'9"	NA

MH-3	Initial	Post Pumping
Depth to groundwater (feet below top of manhole)	7'5"	16'1"
Relative River Elevation (feet below top of manhole)	6'1"	NA
DNAPL Thickness (feet)	23'	NA
Total Sump Depth (feet below top of manhole)	43'11"	NA

# DNAPL/GW Collection System Weekly Data Sheet

Vetrolco Pine River Site  
St. Louis, Michigan

Inspector: \_\_\_\_\_

Date: 10/9/13

MH-1 Groundwater Removal	
Initial Totalizer Reading (gallons)	2536929
Final Totalizer Reading (gallons)	2595195
Total Volume Removed (gallons)	
Time start:	1340
Time stop:	1532

MH-2 Groundwater Removal	
Initial Totalizer Reading (gallons)	2529756
Final Totalizer Reading (gallons)	2536929
Total Volume Removed (gallons)	7173
Time start:	1114
Time stop:	1330

MH-3 Groundwater Removal	
Initial Totalizer Reading (gallons)	2529440
Final Totalizer Reading (gallons)	2529756
Total Volume Removed (gallons)	5316
Time start:	0919
Time stop:	1056



# DNAPL/GW Collection System Weekly Data Sheet

Velalcol Pine River Site  
St. Louis, Michigan

Inspector: \_\_\_\_\_

Date: 10/9

MH-1	Initial	Post Pumping
Depth to groundwater (feet below top of manhole)	3'9"	16'11"
Relative River Elevation (feet below top of manhole)	7'6"	NA
DNAPL Thickness (feet)	28"	NA
Total Sump Depth (feet below top of manhole)	44'11"	NA

MH-2	Initial	Post Pumping
Depth to groundwater (feet below top of manhole)	42'11"	22'8"
Relative River Elevation (feet below top of manhole)	20'	NA
DNAPL Thickness (feet)	0	NA
Total Sump Depth (feet below top of manhole)	42'9"	NA

MH-3	Initial	Post Pumping
Depth to groundwater (feet below top of manhole)	7'9"	15'11"
Relative River Elevation (feet below top of manhole)	6'0"	NA
DNAPL Thickness (feet)	23"	NA
Total Sump Depth (feet below top of manhole)	43'11"	NA



# DNAPL/GW Collection System Weekly Data Sheet

Velsicol Pine River Site  
St. Louis, Michigan

Inspector: \_\_\_\_\_

STP

Date: \_\_\_\_\_

10/15/13

MH-1 Groundwater Removal	
Initial Totalizer Reading (gallons)	2,555,735
Final Totalizer Reading (gallons)	2,560,270
Total Volume Removed (gallons)	4535
Time start:	1305
Time stop:	1415

MH-2 Groundwater Removal	
Initial Totalizer Reading (gallons)	2,549,966
Final Totalizer Reading (gallons)	2,555,735
Total Volume Removed (gallons)	5769
Time start:	1105
Time stop:	1254

MH-3 Groundwater Removal	
Initial Totalizer Reading (gallons)	2,545,195
Final Totalizer Reading (gallons)	2,549,966
Total Volume Removed (gallons)	4771
Time start:	0912
Time stop:	0942

# DNAPL/GW Collection System Weekly Data Sheet

Volsicol Pine River Site  
St. Louis, Michigan

Inspector: \_\_\_\_\_

Date: 10/15/13

MH-1	Initial	Post Pumping
Depth to groundwater (feet below top of manhole)	38'7"	14'11"
Relative River Elevation (feet below top of manhole)	7'11"	NA
DNAPL Thickness (feet)	28"	NA
Total Sump Depth (feet below top of manhole)	44'1"	NA

MH-2	Initial	Post Pumping
Depth to groundwater (feet below top of manhole)	10'2"	20'11"
Relative River Elevation (feet below top of manhole)	28'	NA
DNAPL Thickness (feet)	N/A/O	NA
Total Sump Depth (feet below top of manhole)	42'9"	NA

MH-3	Initial	Post Pumping
Depth to groundwater (feet below top of manhole)	7'7"	15'5"
Relative River Elevation (feet below top of manhole)	6'1"	NA
DNAPL Thickness (feet)	23"	NA
Total Sump Depth (feet below top of manhole)	43'11"	NA

# DNAPL/GW Collection System Weekly Data Sheet

Velocor Pine River Site  
St. Louis, Michigan

Inspector: STP

Date: 10/23/13

MH-1 Groundwater Removal	
Initial Totalizer Reading (gallons)	2571502
Final Totalizer Reading (gallons)	2577827
Total Volume Removed (gallons)	7325
Time start:	1430
Time stop:	1612

MH-2 Groundwater Removal	
Initial Totalizer Reading (gallons)	2565213
Final Totalizer Reading (gallons)	2571502
Total Volume Removed (gallons)	6289
Time start:	1219
Time stop:	1418

MH-3 Groundwater Removal	
Initial Totalizer Reading (gallons)	2560270
Final Totalizer Reading (gallons)	2565213
Total Volume Removed (gallons)	4943
Time start:	1025
Time stop:	1157

18557



# DNAPL/GW Collection System Weekly Data Sheet

Volskol Pine River Site  
St. Louis, Michigan

Inspector: SP

Date: 10/23/13

MH-1	Initial	Post Pumping
Depth to groundwater (feet below top of manhole)	8'5"	15'2"
Relative River Elevation (feet below top of manhole)	8'1"	NA
DNAPL Thickness (feet)	~9"	NA
Total Sump Depth (feet below top of manhole)	44'7" so far	NA

MH-2	Initial	Post Pumping
Depth to groundwater (feet below top of manhole)	9'8"	21'7"
Relative River Elevation (feet below top of manhole)	~7'6"	NA
DNAPL Thickness (feet)	0	NA
Total Sump Depth (feet below top of manhole)	42'9" so far	NA

MH-3	Initial	Post Pumping
Depth to groundwater (feet below top of manhole)	7'4"	15'8"
Relative River Elevation (feet below top of manhole)	6'3"	NA
DNAPL Thickness (feet)	~3"	NA
Total Sump Depth (feet below top of manhole)	43'11"	NA

# DNAPL/GW Collection System Weekly Data Sheet

Velocool Pine River Site  
St. Louis, Michigan

Inspector: 510

Date: 10/30/13

MH-1 Groundwater Removal	
Initial Totalizer Reading (gallons)	2,577,828
Final Totalizer Reading (gallons)	2,585,144
Total Volume Removed (gallons)	7316
Time start:	1130
Time stop:	1330

MH-2 Groundwater Removal	
Initial Totalizer Reading (gallons)	2,585,144
Final Totalizer Reading (gallons)	2,591,134
Total Volume Removed (gallons)	5990
Time start:	1335
Time stop:	1533

MH-3 Groundwater Removal	
Initial Totalizer Reading (gallons)	
Final Totalizer Reading (gallons)	
Total Volume Removed (gallons)	DID NOT OPERATE
Time start:	
Time stop:	

2,577,828  
 2,591,134  
 -----  
 13,306  
 5990  
 -----  
 12306

# DNAPL/GW Collection System Weekly Data Sheet

Velocet Pine River Site  
St. Louis, Michigan

Inspector: SID

Date: 10/30/13

MH-1	Initial	Post Pumping
Depth to groundwater (feet below top of manhole)	8'9"	15'8"
Relative River Elevation (feet below top of manhole)	8'0"	NA
DNAPL Thickness (feet)	8"	NA
Total Sump Depth (feet below top of manhole)	44'1" 50M	NA

MH-2	Initial	Post Pumping
Depth to groundwater (feet below top of manhole)	10'1"	21'4"
Relative River Elevation (feet below top of manhole)	20 feet	NA
DNAPL Thickness (feet)	0	NA
Total Sump Depth (feet below top of manhole)	42'9"	NA

MH-3	Initial	Post Pumping
Depth to groundwater (feet below top of manhole)	DID NOT OPERATE	
Relative River Elevation (feet below top of manhole)		NA
DNAPL Thickness (feet)		NA
Total Sump Depth (feet below top of manhole)		NA





DNAPL/GW Collection System Inspection Form  
Velsicol/Pine River Site  
St. Louis, Michigan

Date: 10/2/13

Inspector/Operator: SJP

Rating Evaluations: S = Satisfactory U = Unsatisfactory

	S	U	Notes/Actions Taken
<b>Secondary Containment Pad</b>			
Control panel boxes secure with no evidence of tampering?	/		
Totalizer operation	/		
Discharge hose in good condition with no leaks present	/		
Tanks in good condition with no evidence of leaks or tampering?	/		
Secondary containment pad dewatering complete (as needed, can be accomplished in conjunction with inspection/operation)?	/		minim
Centrifugal (system booster pump) pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Heat trace operational? (cold weather only)	/		
Other/non-routine issues:			
<b>MH-1 control station</b>			
Gate to manhole secure and locked?	/		
Control panel boxes secure with no evidence of tampering?	/		
Pump and valve boxes in good repair with no evidence of tampering?	/		
Submersible pump operation (if Unsatisfactory/abnormal, explain at right):	/		TRIPPED TWICE during ops-
Pump Box dry with no evidence of leaks?	/		
Pump box heater operational (Cold weather Only)	/		
Secondary Leak alarm status (S=no leak indicated; U=leak indicated)	/		
Centrifugal pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Manhole cover secure and intact?	/		
Other/non-routine issues:			

DNAPL/GW Collection System Inspection Form  
Velsicol/Pine River Site  
St. Louis, Michigan

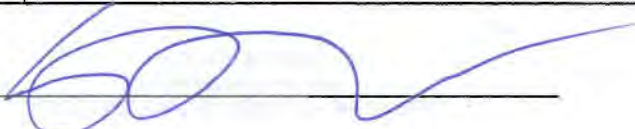
Date: 10/2/13

Inspector/Operator: SJA

Rating Evaluations: S = Satisfactory U = Unsatisfactory

	S	U	Notes/Actions Taken
<b>MH-2 control station</b>			
Gate to manhole secure and locked?	/		
Control panel boxes secure with no evidence of tampering?	/		
Pump and valve boxes in good repair with no evidence of tampering?	/		
Submersible pump operation (if Unsatisfactory/abnormal, explain at right):	/		EGW level below intake after 2 hrs pumping
Pump Box dry with no evidence of leaks?	/		
Pump box heater operational (Cold weather Only)	/		
Secondary Leak alarm status (S=no leak indicated; U=leak indicated)	/		
Centrifugal pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Manhole cover secure and intact?	/		
Other/non-routine issues:			
<b>MH-3 control station</b>			
Gate to manhole secure and locked?	/		
Control panel boxes secure with no evidence of tampering?	/		
Pump and valve boxes in good repair with no evidence of tampering?	/		
Submersible pump operation (if Unsatisfactory/abnormal, explain at right):	/		
Pump Box dry with no evidence of leaks?	/		
Pump box heater operational (Cold weather Only)	/		
Secondary Leak alarm status (S=no leak indicated; U=leak indicated)	/		
Centrifugal pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Manhole cover secure and intact?	/		
Other/non-routine issues:			

Inspection Form Completed by:





DNAPL/GW Collection System Inspection Form  
Velsicol/Pine River Site  
St. Louis, Michigan

Date: 10/9/13

Inspector/Operator SJP

Rating Evaluations: S = Satisfactory U = Unsatisfactory

	S	U	Notes/Actions Taken
<b>Secondary Containment Pad</b>			
Control panel boxes secure with no evidence of tampering?	/		
Totalizer operation	/		
Discharge hose in good condition with no leaks present	/		
Tanks in good condition with no evidence of leaks or tampering?	/		
Secondary containment pad dewatering complete (as needed, can be accomplished in conjunction with inspection/operation)?	/		<i>in progress</i>
Centrifugal (system booster pump) pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Heat trace operational? (cold weather only)	/		
Other/non-routine issues:			
<b>MH-1 control station</b>			
Gate to manhole secure and locked?	/		
Control panel boxes secure with no evidence of tampering?	/		
Pump and valve boxes in good repair with no evidence of tampering?	/		
Submersible pump operation (if Unsatisfactory/abnormal, explain at right):	/		
Pump Box dry with no evidence of leaks?	/		
Pump box heater operational (Cold weather Only)	/		
Secondary Leak alarm status (S=no leak indicated; U=leak indicated)	/		
Centrifugal pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Manhole cover secure and intact?	/		
Other/non-routine issues:			

**DNAPL/GW Collection System Inspection Form**  
**Velsicol/Pine River Site**  
**St. Louis, Michigan**

Date: 10/9/13

Inspector/Operator SIB

Rating Evaluations: S = Satisfactory U = Unsatisfactory

	S	U	Notes/Actions Taken
<b>MH-2 control station</b>			
Gate to manhole secure and locked?	/		
Control panel boxes secure with no evidence of tampering?	/		
Pump and valve boxes in good repair with no evidence of tampering?	/		
Submersible pump operation (if Unsatisfactory/abnormal, explain at right):	/		
Pump Box dry with no evidence of leaks?	/		
Pump box heater operational (Cold weather Only)	/		
Secondary Leak alarm status (S=no leak indicated; U=leak indicated)	/		
Centrifugal pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Manhole cover secure and intact?	/		
Other/non-routine issues:			
<b>MH-3 control station</b>			
Gate to manhole secure and locked?	/		
Control panel boxes secure with no evidence of tampering?	/		
Pump and valve boxes in good repair with no evidence of tampering?	/		
Submersible pump operation (if Unsatisfactory/abnormal, explain at right):	/		
Pump Box dry with no evidence of leaks?	/		
Pump box heater operational (Cold weather Only)	/		
Secondary Leak alarm status (S=no leak indicated; U=leak indicated)	/		
Centrifugal pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Manhole cover secure and intact?	/		
Other/non-routine issues:			

Inspection Form Completed by:



DNAPL/GW Collection System Inspection Form  
Velsicol/Pine River Site  
St. Louis, Michigan

Date: 10/15/13

Inspector/Operator STP

Rating Evaluations: S = Satisfactory U = Unsatisfactory

	S	U	Notes/Actions Taken
<b>Secondary Containment Pad</b>			
Control panel boxes secure with no evidence of tampering?	/		
Totalizer operation	/		
Discharge hose in good condition with no leaks present	/		
Tanks in good condition with no evidence of leaks or tampering?	/		
Secondary containment pad dewatering complete (as needed, can be accomplished in conjunction with inspection/operation)?	/		
Centrifugal (system booster pump) pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Heat trace operational? (cold weather only)	/		
Other/non-routine issues:			
<b>MH-1 control station</b>			
Gate to manhole secure and locked?	/		
Control panel boxes secure with no evidence of tampering?	/		
Pump and valve boxes in good repair with no evidence of tampering?	/		
Submersible pump operation (if Unsatisfactory/abnormal, explain at right):	/		
Pump Box dry with no evidence of leaks?	/		
Pump box heater operational (Cold weather Only)	/		
Secondary Leak alarm status (S=no leak indicated; U=leak indicated)	/		
Centrifugal pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Manhole cover secure and intact?	/		
Other/non-routine issues:			



DNAPL/GW Collection System Inspection Form  
Velsicol/Pine River Site  
St. Louis, Michigan

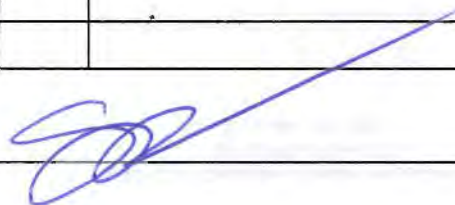
Date: 10/16/13

Inspector/Operator SIF

Rating Evaluations: S = Satisfactory U = Unsatisfactory

	S	U	Notes/Actions Taken
<b>MH-2 control station</b>			
Gate to manhole secure and locked?	/		
Control panel boxes secure with no evidence of tampering?	/		
Pump and valve boxes in good repair with no evidence of tampering?	/		
Submersible pump operation (if Unsatisfactory/abnormal, explain at right):	/		
Pump Box dry with no evidence of leaks?	/		
Pump box heater operational (Cold weather Only)	/		
Secondary Leak alarm status (S=no leak indicated; U=leak indicated)	/		
Centrifugal pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Manhole cover secure and intact?	/		
Other/non-routine issues:			
<b>MH-3 control station</b>			
Gate to manhole secure and locked?	/		
Control panel boxes secure with no evidence of tampering?	/		
Pump and valve boxes in good repair with no evidence of tampering?	/		
Submersible pump operation (if Unsatisfactory/abnormal, explain at right):	/		
Pump Box dry with no evidence of leaks?	/		
Pump box heater operational (Cold weather Only)	/		
Secondary Leak alarm status (S=no leak indicated; U=leak indicated)	/		
Centrifugal pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Manhole cover secure and intact?	/		
Other/non-routine issues:			

Inspection Form Completed by:



DNAPL/GW Collection System Inspection Form  
Velsicol/Pine River Site  
St. Louis, Michigan

Date: 12/13/13

Inspector/Operator STB

Rating Evaluations: S = Satisfactory U = Unsatisfactory

	S	U	Notes/Actions Taken
<b>Secondary Containment Pad</b>			
Control panel boxes secure with no evidence of tampering?	/		
Totalizer operation	/		
Discharge hose in good condition with no leaks present	/		
Tanks in good condition with no evidence of leaks or tampering?	/		
Secondary containment pad dewatering complete (as needed, can be accomplished in conjunction with inspection/operation)?	/		In progress
Centrifugal (system booster pump) pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Heat trace operational? (cold weather only)	/		
Other/non-routine issues:			
<b>MH-1 control station</b>			
Gate to manhole secure and locked?	/		
Control panel boxes secure with no evidence of tampering?	/		
Pump and valve boxes in good repair with no evidence of tampering?	/		
Submersible pump operation (if Unsatisfactory/abnormal, explain at right):	/		
Pump Box dry with no evidence of leaks?	/		
Pump box heater operational (Cold weather Only)	/		
Secondary Leak alarm status (S=no leak indicated; U=leak indicated)	/		
Centrifugal pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Manhole cover secure and intact?	/		
Other/non-routine issues:			



DNAPL/GW Collection System Inspection Form  
Velsicol/Pine River Site  
St. Louis, Michigan


Date: 11/23/13

Inspector/Operator SJB

Rating Evaluations: S = Satisfactory U = Unsatisfactory

	S	U	Notes/Actions Taken
<b>MH-2 control station</b>			
Gate to manhole secure and locked?	/		
Control panel boxes secure with no evidence of tampering?	/		
Pump and valve boxes in good repair with no evidence of tampering?	/		
Submersible pump operation (if Unsatisfactory/abnormal, explain at right):	/		
Pump Box dry with no evidence of leaks?	/		
Pump box heater operational (Cold weather Only)	/		
Secondary Leak alarm status (S=no leak indicated; U=leak indicated)	/		
Centrifugal pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Manhole cover secure and intact?	/		
Other/non-routine issues:			
<b>MH-3 control station</b>			
Gate to manhole secure and locked?	/		
Control panel boxes secure with no evidence of tampering?	/		
Pump and valve boxes in good repair with no evidence of tampering?	/		
Submersible pump operation (if Unsatisfactory/abnormal, explain at right):	/		
Pump Box dry with no evidence of leaks?	/		
Pump box heater operational (Cold weather Only)	/		
Secondary Leak alarm status (S=no leak indicated; U=leak indicated)	/		
Centrifugal pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Manhole cover secure and intact?	/		
Other/non-routine issues:			

Inspection Form Completed by:



DNAPL/GW Collection System Inspection Form  
Velsicol/Pine River Site  
St. Louis, Michigan

Date: 10/30/13

Inspector/Operator SFA

Rating Evaluations: S = Satisfactory U = Unsatisfactory

	S	U	Notes/Actions Taken
<b>Secondary Containment Pad</b>			
Control panel boxes secure with no evidence of tampering?	/		
Totalizer operation	/		
Discharge hose in good condition with no leaks present	/		
Tanks in good condition with no evidence of leaks or tampering?	/		
Secondary containment pad dewatering complete (as needed, can be accomplished in conjunction with inspection/operation)?	/		
Centrifugal (system booster pump) pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Heat trace operational? (cold weather only)	/		
Other/non-routine issues:			
<b>MH-1 control station</b>			
Gate to manhole secure and locked?	/		
Control panel boxes secure with no evidence of tampering?	/		
Pump and valve boxes in good repair with no evidence of tampering?	/		
Submersible pump operation (if Unsatisfactory/abnormal, explain at right):	/		
Pump Box dry with no evidence of leaks?	/		
Pump box heater operational (Cold weather Only)	/		
Secondary Leak alarm status (S=no leak indicated; U=leak indicated)	/		
Centrifugal pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Manhole cover secure and intact?	/		
Other/non-routine issues:			



DNAPL/GW Collection System Inspection Form  
Velsicol/Pine River Site  
St. Louis, Michigan

Date: 10/30/13

Inspector/Operator SIF

Rating Evaluations: S = Satisfactory U = Unsatisfactory

	S	U	Notes/Actions Taken
<b>MH-2 control station</b>			
Gate to manhole secure and locked?	/		
Control panel boxes secure with no evidence of tampering?	/		
Pump and valve boxes in good repair with no evidence of tampering?	/		
Submersible pump operation (if Unsatisfactory/abnormal, explain at right):	/		
Pump Box dry with no evidence of leaks?	/		
Pump box heater operational (Cold weather Only)	/		
Secondary Leak alarm status (S=no leak indicated; U=leak indicated)	/		
Centrifugal pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Manhole cover secure and intact?	/		
Other/non-routine issues:			
<b>MH-3 control station</b>			
Gate to manhole secure and locked?	/		
Control panel boxes secure with no evidence of tampering?	/		
Pump and valve boxes in good repair with no evidence of tampering?	/		
Submersible pump operation (if Unsatisfactory/abnormal, explain at right):			Did not operate
Pump Box dry with no evidence of leaks?	/		
Pump box heater operational (Cold weather Only)	/		
Secondary Leak alarm status (S=no leak indicated; U=leak indicated)	/		
Centrifugal pump lubrication (oil level and grease cup) (See ISMP, Appendix B)	/		
Manhole cover secure and intact?	/		
Other/non-routine issues:			

Inspection Form Completed by:



**Velsicol Pine River Site**  
**St. Louis, Michigan**

Date: 10/9/13

[illegible]



**Velsicol Pine River Site**  
**St. Louis, Michigan**

Date: 10/03/13

[illegible]



<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number MID000722439	2. Page 1 of 1	3. Emergency Response Phone (800) 510-8510	4. Manifest Tracking Number <b>011669313 JJK</b>				
5. Generator's Name and Mailing Address USEPA C/O CH2M HILL 7927 NEMCO WAY SUITE 120 BRIGHTON MI 48116 Generator's Phone: (248) 219-7146			Generator's Site Address (if different than mailing address) USEPA/ELSKOLPINE RIVER SUPERFUND SITE 324 NORTH STREET ST. LOUIS MO 63103						
6. Transporter 1 Company Name US Ecology Michigan, Inc.			U.S. EPA ID Number MID074259565						
7. Transporter 2 Company Name			U.S. EPA ID Number						
8. Designated Facility Name and Site Address U.S. ECOLOGY MICHIGAN, INC. 6620 GEORGIA ST. DETROIT MI 48211 Facility's Phone: (313) 571-7140			U.S. EPA ID Number MID074259565						
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
			No.	Type					
	1. RQ, NA3082, HAZARDOUS WASTE, LIQUID, N.O. 3 (BENZENE, CHLOROFORM), 9, PG III		1	TT	8824	G	D018	D019	D022
							D028	D029	D039
14. Special Handling Instructions and Additional Information 1. 001.0 HAZARDOUS WASTEWATER Also contains D040 and D043									
15. <b>GENERATOR'S/OFFEROR'S CERTIFICATION:</b> I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.									
Generator's/Officer's Printed/Typed Name Scott From for ASSTA			Signature [Signature]			Month 10	Day 3	Year 03	
INTL	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: _____ Date leaving U.S.: _____						
	Transporter signature (for exports only):								
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials								
	Transporter 1 Printed/Typed Name MICHAEL G. TURNER			Signature [Signature]			Month 10	Day 03	Year 03
DESIGNATED FACILITY	Transporter 2 Printed/Typed Name			Signature			Month	Day	Year
	18. Discrepancy								
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection								
	Manifest Reference Number:								
	18b. Alternate Facility (or Generator)			U.S. EPA ID Number					
	Facility's Phone:								
	18c. Signature of Alternate Facility (or Generator)						Month	Day	Year
	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)								
	1. H077	2.	3.	4.					
	20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a								
Printed/Typed Name			Signature			Month	Day	Year	



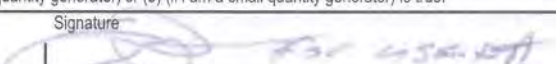
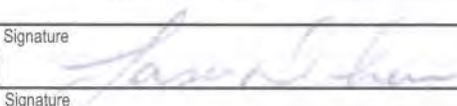
<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number MID000722439	2. Page 1 of 1	3. Emergency Response Phone (800) 510-8510	4. Manifest Tracking Number 011669314 JJK				
5. Generator's Name and Mailing Address USEPA/CIO CHEM HILL 7927 NEMCO WAY SUITE 120 BRIGHTON MI 48116 Generator's Phone: (248) 210-7140			Generator's Site Address (if different than mailing address) USEPA/CIO/CHEM HILL SUPERFUND SITE 324 NORTH STREET ST. LOUIS MI 48660						
6. Transporter 1 Company Name US Ecology Michigan, Inc.			U.S. EPA ID Number MID074259585						
7. Transporter 2 Company Name			U.S. EPA ID Number						
8. Designated Facility Name and Site Address U.S. ECOLOGY MICHIGAN, INC. 6620 GEORGINA ST. DETROIT MI 48211 Facility's Phone: (313) 571-7140			U.S. EPA ID Number MID074259585						
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
			No.	Type					
	1. RC, NA3082, HAZARDOUS WASTE, LIQUID, N.O.S. (BENZENE, CHLOROFORM), R, PG III		1	TT	9700	G	D018	D019	D022
							D028	D029	D039
14. Special Handling Instructions and Additional Information 1. 0201 HAZARDOUS WASTEWATER  Also contains D040 and D043									
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.									
Generator's/Officer's Printed/Typed Name Scott Port for USEPA			Signature [Signature]			Month Day Year 10 5 13			
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Transporter signature (for exports only): _____ Date leaving U.S.: _____									
17. Transporter Acknowledgment of Receipt of Materials									
Transporter 1 Printed/Typed Name Robert L. Fournier			Signature [Signature]			Month Day Year 10 13 13			
Transporter 2 Printed/Typed Name			Signature			Month Day Year			
18. Discrepancy									
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection									
Manifest Reference Number: _____									
18b. Alternate Facility (or Generator) U.S. EPA ID Number									
Facility's Phone: _____									
18c. Signature of Alternate Facility (or Generator) Month Day Year									
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)									
1. H077		2.		3.		4.			
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a									
Printed/Typed Name			Signature			Month Day Year			

↑ GENERATOR ↓	<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number MID000722439	2. Page 1 of 1	3. Emergency Response Phone (800) 510-8510	4. Manifest Tracking Number 011669406 JJK				
	5. Generator's Name and Mailing Address USEPA C/O CHEM HILL 7527 NEMCO WAY SUITE 120 BRIGHTON MI 48116 Generator's Phone: (248) 219-7140				Generator's Site Address (if different than mailing address) USEPA/ELSICOL PINE RIVER SUPERFUND SITE 324 NORTH STREET ST. LOUIS MI 48800					
	6. Transporter 1 Company Name US Ecology Michigan, Inc.				U.S. EPA ID Number MID074259565					
	7. Transporter 2 Company Name				U.S. EPA ID Number					
	8. Designated Facility Name and Site Address U.S. ECOLOGY MICHIGAN, INC. 6520 GEORGIA ST. DETROIT MI 48211 Facility's Phone: (313) 571-7140				U.S. EPA ID Number MID074259565					
↑ TRANSPORTER ↓	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))			10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
	X	1. RC, NA3082, HAZARDOUS WASTE, LIQUID, N.O.S. (BENZENE, CHLOROFORM), U, PG III			1 TT		9.52	GA	D018 D019 D022 D028 D029 D039	
		2.								
		3.								
		4.								
↑ DESIGNATED FACILITY ↓	14. Special Handling Instructions and Additional Information 1. RC01-0 HAZARDOUS WASTEWATER Also contains D040 and D043 TUR# 85									
	15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.									
	Generator's/Offoror's Printed/Typed Name JOHN DEATH				Signature [Signature]				Month Day Year 10 10 13	
	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Transporter signature (for exports only): _____ Date leaving U.S.: _____									
	17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name MIKE FLINT Signature [Signature] Month Day Year 10 10 13 Transporter 2 Printed/Typed Name Signature [Signature] Month Day Year									
↑ DESIGNATED FACILITY ↓	18. Discrepancy 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection Manifest Reference Number: _____									
	18b. Alternate Facility (or Generator) U.S. EPA ID Number									
	Facility's Phone: _____									
	18c. Signature of Alternate Facility (or Generator) Month Day Year									
	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 1. H077 2. 3. 4.									
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a Printed/Typed Name Signature Month Day Year										



<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number MID000722439	2. Page 1 of 1	3. Emergency Response Phone (800) 510-8510	4. Manifest Tracking Number 011669407 JJK		
5. Generator's Name and Mailing Address USEPA C/O CH2M HILL 7827 NEMCO WAY SUITE 120 BRIGHTON MI 48116 Generator's Phone: (248) 218-7140			Generator's Site Address (if different than mailing address) USEPA/VELSICOL PINE RIVER SUPERFUND SITE 324 NORTH STREET ST. LOUIS MI 48020				
6. Transporter 1 Company Name US Ecology Michigan, Inc.			U.S. EPA ID Number MID074259565				
7. Transporter 2 Company Name			U.S. EPA ID Number				
8. Designated Facility Name and Site Address U.S. ECOLOGY MICHIGAN, INC. 6620 GEORGIA ST. DETROIT MI 48211 Facility's Phone: (313) 571-7140			U.S. EPA ID Number MID074259565				
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No. Type		11. Total Quantity	12. Unit WL/Vol.	13. Waste Codes
	X	1. RC, NA3082, HAZARDOUS WASTE, LIQUID, N.O.S. (BENZENE, CHLOROFORM), B, PG III	1	TT	9941	G	D018 D019 D022 D028 D029 D038
		2.					
		3.					
		4.					
14. Special Handling Instructions and Additional Information 1-6201-D HAZARDOUS WASTEWATER Also contains D040 and D043 TR-78V							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Officer's Printed/Typed Name Scott P. ...		Signature [Signature]		Month Day Year 10 10 18			
INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: Date leaving U.S.:				
	Transporter signature (for exports only):						
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials						
	Transporter 1 Printed/Typed Name Tom Mills		Signature [Signature]		Month Day Year 10 10 18		
DESIGNATED FACILITY	Transporter 2 Printed/Typed Name		Signature		Month Day Year		
	18. Discrepancy						
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
	Manifest Reference Number:						
	18b. Alternate Facility (or Generator)		U.S. EPA ID Number				
Facility's Phone:							
18c. Signature of Alternate Facility (or Generator)							
Month Day Year							
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. H077		2.		3.		4.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name		Signature		Month Day Year			



<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number <b>MID000722439</b>		2. Page 1 of <b>1</b>		3. Emergency Response Phone <b>(800) 510-8510</b>		4. Manifest Tracking Number <b>012290179 JJK</b>				
		5. Generator's Name and Mailing Address <b>USEPA CO CIRM HILL 7827 NEMCO WAY SUITE 120 BRIGHTON MI 48116 Generator's Phone: (248) 219-7140</b>						Generator's Site Address (if different than mailing address) <b>USEPA VEL SICO PINE RIVER SUPERFUND SITE 324 NORTH STREET ST. LOUIS MI 48880</b>				
6. Transporter 1 Company Name <b>US Ecology Michigan, Inc.</b>						U.S. EPA ID Number <b>MID074259585</b>						
7. Transporter 2 Company Name						U.S. EPA ID Number						
8. Designated Facility Name and Site Address <b>U.S. ECOLOGY MICHIGAN, INC. 6520 GEORGIA ST. DETROIT MI 48211 Facility's Phone: (313) 571-7140</b>						U.S. EPA ID Number <b>MID074259585</b>						
<b>GENERATOR</b>	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))				10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
						No.	Type					
	<b>X</b>	<b>1. RC NA3082, HAZARDOUS WASTE, LIQUID, N.O.S. (BENZENE, CHLOROFORM), D, PG III</b>				<b>1</b>	<b>TT</b>	<b>9278</b>	<b>G</b>	<b>D018</b>	<b>D019</b>	<b>D022</b>
										<b>D025</b>	<b>D029</b>	<b>D039</b>
	14. Special Handling Instructions and Additional Information <b>1. 6201.0 HAZARDOUS WASTEWATER Also contains D040 and D043</b> <div style="text-align: center; font-size: 2em; margin-top: 10px;"><b>85A</b></div>											
15. <b>GENERATOR'S/OFFEROR'S CERTIFICATION:</b> I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.												
Generator's/Officer's Printed/Typed Name <b>Scott M. For USEPA</b>						Signature 		Month Day Year <b>10 17 13</b>				
<b>INT'L</b>	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____											
	Transporter signature (for exports only): _____											
<b>TRANSPORTER</b>	17. Transporter Acknowledgment of Receipt of Materials											
	Transporter 1 Printed/Typed Name <b>Jason Durham</b>						Signature 		Month Day Year <b>10 17 13</b>			
	Transporter 2 Printed/Typed Name						Signature		Month Day Year			
<b>DESIGNATED FACILITY</b>	18. Discrepancy											
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection											
	Manifest Reference Number: _____											
	18b. Alternate Facility (or Generator)						U.S. EPA ID Number					
	Facility's Phone: _____											
	18c. Signature of Alternate Facility (or Generator)								Month Day Year			
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)												
1. <b>H077</b>				2.				3.		4.		
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a												
Printed/Typed Name						Signature		Month Day Year				



<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number <b>MID000722439</b>	2. Page 1 of <b>1</b>	3. Emergency Response Phone <b>(800) 510-8510</b>	4. Manifest Tracking Number <b>012290180 JJK</b>			
5. Generator's Name and Mailing Address <b>USEPA G/O CH2M HILL 7027 NEMCO WAY SUITE 120 BRIGHTON MI 48116</b> Generator's Phone: <b>(248) 210-7146</b>			Generator's Site Address (if different than mailing address) <b>USEPA WELLS COAL PINE RIVER SUPERFUND SITE 324 NORTH STREET ST. LOUIS MI 48110</b>					
6. Transporter 1 Company Name <b>US Ecology Michigan, Inc.</b>			U.S. EPA ID Number <b>MID074259565</b>					
7. Transporter 2 Company Name			U.S. EPA ID Number					
8. Designated Facility Name and Site Address <b>U.S. ECOLOGY MICHIGAN, INC. 6520 GEORGIA ST. DETROIT MI 48211</b> Facility's Phone: <b>(313) 571-7140</b>			U.S. EPA ID Number <b>MID074259565</b>					
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
			No.	Type				
	1. <b>RC, NA3082, HAZARDOUS WASTE, LIQUID, N.O.S. (BENZENE, CHLOROFORM), II, PG III</b>		<b>1</b>	<b>TT</b>	<b>9228</b>	<b>G</b>	<b>D018 D019 D022 D028 D029 D039</b>	
	2.							
	3.							
4.								
14. Special Handling Instructions and Additional Information <b>1. 8201-0 HAZARDOUS WASTEWATER Also Contains D040 and D043</b> <b>78</b>								
15. <b>GENERATOR'S/OFFEROR'S CERTIFICATION:</b> I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.								
Generator's/Offoror's Printed/Typed Name <b>Scott Anne For USDA</b>			Signature <b>[Signature]</b>			Month <b>10</b>	Day <b>17</b>	Year <b>13</b>
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Transporter signature (for exports only): _____ Date leaving U.S.: _____								
17. Transporter Acknowledgment of Receipt of Materials								
Transporter 1 Printed/Typed Name <b>Scott Bilbrey</b>			Signature <b>[Signature]</b>			Month <b>10</b>	Day <b>17</b>	Year <b>13</b>
Transporter 2 Printed/Typed Name			Signature			Month	Day	Year
18. Discrepancy								
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection								
Manifest Reference Number: _____								
18b. Alternate Facility (or Generator)						U.S. EPA ID Number		
Facility's Phone:								
18c. Signature of Alternate Facility (or Generator)						Month	Day	Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)								
1. <b>H077</b>		2.		3.		4.		
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a								
Printed/Typed Name			Signature			Month	Day	Year



<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number MID000722439	2. Page 1 of 1	3. Emergency Response Phone (800) 510-8510	4. Manifest Tracking Number 012290267 JJK		
5. Generator's Name and Mailing Address USEPA DO CHAM HILL 7027 NEMCO WAY SUITE 120 BRIGHTON MI 48116 Generator's Phone: (248) 219-7146			Generator's Site Address (if different than mailing address) USEPA VELSICOL PINE RIVER SUPERFUND SITE 324 NORTH STREET ST. LOUIS MI 48380				
6. Transporter 1 Company Name US Ecology Michigan, Inc.			U.S. EPA ID Number MID074259585				
7. Transporter 2 Company Name			U.S. EPA ID Number				
8. Designated Facility Name and Site Address U.S. ECOLOGY MICHIGAN, INC. 0020 GEORGIA ST. DETROIT MI 48211 Facility's Phone: (313) 571-7140			U.S. EPA ID Number MID074259585				
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	X	1. PG NA3082, HAZARDOUS WASTE, LIQUID, N.O.S. (BENZENE, CHLOROFORM), 9, PG III	1	TT	8504	G	D018 D019 D022 D028 D029 D038
		2.					
		3.					
		4.					
14. Special Handling Instructions and Additional Information 1. 6201.0 HAZARDOUS WASTEWATER (Also D040, D045) 852							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offeror's Printed/Typed Name Michael G. Turner		Signature [Signature]		Month Day Year 10 24 13			
TRANSPORTER INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Transporter signature (for exports only): _____ Date leaving U.S.: _____						
	17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name MICHAEL G. TURNER Signature [Signature] Month Day Year 10 24 13 Transporter 2 Printed/Typed Name Signature _____ Month Day Year _____						
DESIGNATED FACILITY	18. Discrepancy						
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
	18b. Alternate Facility (or Generator) Manifest Reference Number: _____ U.S. EPA ID Number _____						
	Facility's Phone: _____ 18c. Signature of Alternate Facility (or Generator) _____ Month Day Year _____						
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. H077		2.		3.		4.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a Printed/Typed Name _____ Signature _____ Month Day Year _____							



<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number MID000722439	2. Page 1 of 1	3. Emergency Response Phone (800) 510-8510	4. Manifest Tracking Number 012290268 JJK		
5. Generator's Name and Mailing Address USEPA C/O CH2M HILL 7927 NEMCO WAY SUITE 120 BRIGHTON MI 48116 Generator's Phone: (248) 219-7140			Generator's Site Address (if different than mailing address) USEPA/VELSKOL PINE RIVER SUPERFUND SITE 324 NORTH STREET ST. LOUIS MI 48600				
6. Transporter 1 Company Name US Ecology Michigan, Inc.			U.S. EPA ID Number MID074259565				
7. Transporter 2 Company Name			U.S. EPA ID Number				
8. Designated Facility Name and Site Address U.S. ECOLOGY MICHIGAN, INC. 6520 GEORGIA ST. DETROIT MI 48211 Facility's Phone: (313) 571-7140			U.S. EPA ID Number MID074259565				
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RC, NA3082, HAZARDOUS WASTE, LIQUID, N.O.S. (BENZENE, CHLOROFORM), 9, PG III		1 TT		9108	G	D018 D019 D022 D028 D029 D039
	2.						
	3.						
	4.						
14. Special Handling Instructions and Additional Information 1. 6201-D HAZARDOUS WASTEWATER (ABO D040, D043) 78							
15. <b>GENERATOR'S/OFFEROR'S CERTIFICATION:</b> I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offor's Printed/Typed Name SCOTT PRATT FOR USEPA			Signature [Signature]			Month Day Year 10/24/13	
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Transporter signature (for exports only): _____ Date leaving U.S.: _____							
17. Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name Scott Bilbrey			Signature [Signature]			Month Day Year 10/24/13	
Transporter 2 Printed/Typed Name			Signature			Month Day Year	
18. Discrepancy							
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
Manifest Reference Number:							
18b. Alternate Facility (or Generator) U.S. EPA ID Number							
Facility's Phone:							
18c. Signature of Alternate Facility (or Generator)						Month Day Year	
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. H077		2.		3.		4.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name			Signature			Month Day Year	



UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number MID000722439	2. Page 1 of 1	3. Emergency Response Phone (800) 510-8510	4. Manifest Tracking Number 012290457 JJK		
5. Generator's Name and Mailing Address OSEPA CO. CUM HILL 7927 NEMCO WAY SUITE 120 BRIGHTON MI 48116 Generator's Phone: (248) 219-7140			Generator's Site Address (if different than mailing address) USEPA WELLSVILLE RIVER SUPERFUND SITE 324 NORTH STREET ST. LOUIS MI 48190				
6. Transporter 1 Company Name US Ecology Michigan, Inc.			U.S. EPA ID Number MID074259585				
7. Transporter 2 Company Name			U.S. EPA ID Number				
8. Designated Facility Name and Site Address U.S. ECOLOGY MICHIGAN, INC. 6620 GEORGIA ST DETROIT MI 48211 Facility's Phone: (313) 571-7140			U.S. EPA ID Number MID074259585				
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RC, HAZARDOUS WASTE, LIQUID, N.O.S. (BENZENE, CHLOROFORM), U. PG III		1 TT		8636	G	D018 D019 D022 D026 D029 D039
	2.						
	3.						
	4.						
14. Special Handling Instructions and Additional Information 1. 601.0 HAZARDOUS WASTEWATER Also contains D040 and D043 25							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offor's Printed/Typed Name Scott Pratt for USEPA			Signature [Signature] for USEPA			Month 10	Day 31 Year 13
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Transporter signature (for exports only): _____ Date leaving U.S.: _____							
17. Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name Scott Bilbey			Signature [Signature]			Month 10	Day 31 Year 13
Transporter 2 Printed/Typed Name			Signature			Month	Day Year
18. Discrepancy							
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection Manifest Reference Number: _____							
18b. Alternate Facility (or Generator) U.S. EPA ID Number							
Facility's Phone: _____							
18c. Signature of Alternate Facility (or Generator)						Month	Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. H077		2.		3.		4.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name			Signature			Month	Day Year



<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number <b>MID000722439</b>	2. Page 1 of <b>1</b>	3. Emergency Response Phone <b>(800) 510-8510</b>	4. Manifest Tracking Number <b>012290458 JJK</b>			
5. Generator's Name and Mailing Address <b>USE-A-CO CHEM HILL 7927 NEMCO WAY SUITE 120 BRIGHTON MI 48110</b> Generator's Phone: <b>(248) 210-7140</b>				Generator's Site Address (if different than mailing address) <b>USE-A-CO CHEMICAL PINE RIVER SUPERFUND SITE 324 NORTH STREET ST. LOUIS MI 48681</b>				
6. Transporter 1 Company Name <b>US Ecology Michigan, Inc.</b>					U.S. EPA ID Number <b>MID074259565</b>			
7. Transporter 2 Company Name					U.S. EPA ID Number			
8. Designated Facility Name and Site Address <b>U.S. ECOLOGY MICHIGAN, INC. 0520 GEORGIA ST. DETROIT MI 48211</b> Facility's Phone: <b>(313) 571-7140</b>					U.S. EPA ID Number <b>MID074259565</b>			
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
				No.	Type			
	<b>X</b>	<b>1. RC, NA3082, HAZARDOUS WASTE, LIQUID, N.O.S. (BENZENE CHLOROFORM), 9, PG III</b>		<b>1</b>	<b>TT</b>	<b>8425</b>	<b>G</b>	<b>D018 D019 D022 D028 D029 D039</b>
		2.						
		3.						
	4.							
14. Special Handling Instructions and Additional Information <b>1. 6201.0 HAZARDOUS WASTEWATER</b> <b>Also contains D040 and D043.</b> <b>57 TR-76V</b>								
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.								
Generator's/Offeror's Printed/Typed Name <b>Scott Grant Fairclough</b>				Signature <i>[Signature]</i>		Month Day Year <b>10/31/13</b>		
INTL	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Transporter signature (for exports only): _____ Date leaving U.S.: _____							
	17. Transporter Acknowledgment of Receipt of Materials							
TRANSPORTER	Transporter 1 Printed/Typed Name <b>Tom Miller</b>				Signature <i>[Signature]</i>		Month Day Year <b>10/31/13</b>	
	Transporter 2 Printed/Typed Name				Signature		Month Day Year	
DESIGNATED FACILITY	18. Discrepancy							
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
	Manifest Reference Number:							
	18b. Alternate Facility (or Generator)						U.S. EPA ID Number	
	Facility's Phone:							
18c. Signature of Alternate Facility (or Generator)						Month Day Year		
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)								
1. <b>H077</b>			2.		3.		4.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a								
Printed/Typed Name				Signature		Month Day Year		